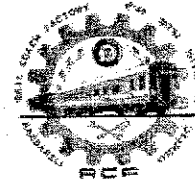




रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8002
VERSION: 2012-01-02

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 25/03/2015

SHELLNo.	L	W	A	C	C	N	0	6	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	1	8	0	2	2	0	1	5
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RLY	S	E	R	Type	L	W	A	C	C	N	Coach No.	1	4	8	1	3	6	/	C
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- Railway Board's Order No. : 2014/M(C)/142/1 dated 08.09.2014
- Tare Weight of Coach : 45.6 Tonnes
- Carrying Capacity : (a) Seating : 72 (b) Sleeping : 72 (c) Luggage : NIL

4. SHELL LEADING DIMENSIONS:

S NO	DESCRIPTION	DIMENSION (MM)
1.	Maximum length over body	23700
2.	Maximum width over body	3240
3.	Maximum height from Rail Level	4250
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1102(NPPE) 2) 1097(PPE)

5. TRACEABILITY OF SHELL ITEMS:

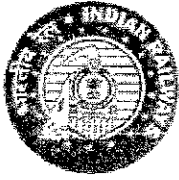
S NO	ITEM	MAKE/SUPPLIER	SERIAL NO			
1.	Buffers	N.A.				
2.	Centre Buffer-Coupler	M/s ESCORTS	PP END	3171	NPP END	3170

6. AIRBRAKE TEST REPORT:

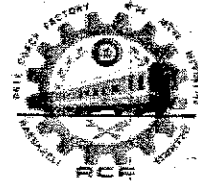
S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	<ul style="list-style-type: none"> ➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm² ➤ Max. pressure in BC ➤ All Brake are applied 	6 - 10 sec 3.0 ± 0.15 kg/cm ² OK	9 Sec. 3.0 kg/cm ² OK
2.	Insensitivity	<ul style="list-style-type: none"> ➤ Exhaust BP @ 0.3 kg/cm²/min. 	No brake application	OK
3.	Sensitivity	<ul style="list-style-type: none"> ➤ Exhaust BP @ 0.1 kg/cm²/Sec. after 02 Sec. 	Brake must apply	OK

7. PAINTING DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	VIBGYOR	96.7/96.3
2.	Insulation		Satisfactory	



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RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001
VERSION: 2012-01-01

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 25/03/2015

SHELL No.	L	W	A	C	C	N	0	6	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	1	8	0	2	2	0	1	5
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RLY	S	E	R	Type	L	W	A	C	C	N	Coach No.	1	4	8	1	3	6	/	C
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8. DETAIL OF BOGIES :

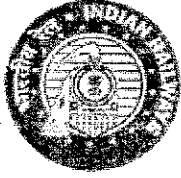
ITEMS	PP SIDE				NPP SIDE			
Bogie No	147067				147068			
Bogie Type	Fiat				Fiat			
Axle No	A-2919		B-9869		Z-3345		A-3135	
Wheel Dia	917.00	917.00	917.00	917.00	917.00	917.00	917.00	917.00
Wheel Disc No.	287-16339	009-11605	268-11610	244-16339	225-51912	037-51916	007-51916	023-11611
R.B. Nos.	36299	36007	35939	36436	36511	35956	35782	35944
CT R B Make.	TIMKEN		TIMKEN		TIMKEN		TIMKEN	

9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

DESCRIPTION	BOGIE PP SIDE				BOGIE NPP SIDE			
	SECONDARY 1		SECONDARY 2		SECONDARY 1		SECONDARY 2	
	OUTER	INNER	OUTER	INNER	OUTER	INNER	OUTER	INNER
Make & Nos.	CMFSK-14-2-59	G-13-8-4000	CMFSK-14-2-44	G-13-3-4336	CMFSK-14-2-74	G-13-3-4053	CMFSK-14-2-71	G-12-5-2011
Compressed Ft. at Tested Load	510	465	514	467	511	466	514	466
Alignment deviation (mm)	6	20	4	16	6	5	6	9

10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	L&S-12-5	L&S-12-5	L&S
2.	Primary Inner Spring	L&S-12-5	L&S-12-5	L&S
3.	Primary Damper			GEREP
4.	Secondary Damper			SACHS
5.	Lateral Damper			GEREP
6.	Yaw Damper			KONI
7.	Brake Cylinder & Caliper			KBI
8.	Brake Disc			KBI
9.	Ball Joint Control Arm			GMT
10.	Lateral Bump Stop			GMT
11.	Traction Centre make			SARITA
12.	Traction lever make			SARITA
13.	Ball joint traction lever			GMT
14.	Ball joint traction centre			SGA
15.	Secondary Rubber Pad			TESPAK
16.	Rubber Spring			GMT
17.	Anti roll bar make			EMSON
18.	Roll Link make			SARITA
19.	Fork make			EMSON



रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001
VERSION: 2012-01-01

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

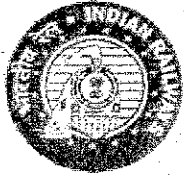
Date: 25/03/2015

SHELLNo.	L	W	A	C	C	N	0	6	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	1	8	0	2	2	0	1	5
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RLY	S	E	R	Type	L	W	A	C	C	N	Coach No.	1	4	8	1	3	6	/	C
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11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL-NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	14J0806
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	2014H1321
4.	PVC	M/s Responsive Industries, Mumbai	
5.	UIC Vestibule (PPE)	M/s Ameenji Pvt. Ltd. Hyderabad	
6.	UIC Vestibule (NPPE)	M/s Ameenji Pvt. Ltd. Hyderabad	
7.	Foot Step	M/s Super Spark Pvt. Ltd. Faridabad	
8.	Decoupling arrangement	M/s SECO Industries, Mumbai	
9.	Body Side Window	M/s Aikon Technology Pvt. Ltd. Solan H.P	
10.	Emergency Window	M/s Rail Tech, Kapurthala	
11.	Lavatory Window	M/s Rail Tech, Kapurthala	
12.	Roof Ceiling	M/s KAE Engg. Pvt. Ltd. Sitarganj, U.K.	
13.	Non-AC Area Ceiling	M/s Amirchand Engg. Works Jalandhar	
14.	Supply Air Duct	M/s Amirchand Engg. Works Jalandhar	
15.	Body Side Doors	M/s JBM Faridabad	
16.	Compartment Door (PPE)	M/s Rail Tech, Kapurthala	
17.	Compartment Door (NPPE)	M/s Rail Tech, Kapurthala	
18.	Vestibule Door(PPE)	M/s Kalsi Ludhiana	
19.	Vestibule Door(NPPE)	M/s Kalsi Ludhiana	
20.	CDTS	M/s Amit Engineers Baddi (HP)	
21.	Auxiliary Water Tank	M/s Manoj Enterprises, Mohali Punjab	
22.	Under Slung Water Tank(450 L)	M/s Shivalik Fastener Mohali PB	
23.	Under Slung Water Tank(2X685L)	M/s Shivalik Fastener Mohali PB	
24.	Flexible Faucet	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
25.	Lotah Filler Tap	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
26.	Lavatory Modoules	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
27.	Lavatory Doors	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
28.	Waste Bin Arrangement	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
29.	Fire Extinguisher	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
30.	Side Wall panel	M/s KAE Engg. Pvt. Ltd. Sitarganj, U.K.	
31.	Seat & Berth	M/s Savitry Engineering Products, Pontasahib	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s Anjani Technology Noida	



रेल डिब्बा कारखाना, रायबरेली
RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001
VERSION: 2012-01-01

ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 25/03/2015

SHELL No.	L	W	A	C	C	N	0	6	R	B	L	/	1	4	-	1	5	DATE OF DISPATCH	1	8	0	2	2	0	1	5
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RLY	S	E	R	Type	L	W	A	C	C	N	Coach No.	1	4	8	1	3	6	/	C
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12. MODIFICATION (IF ANY) : NIL

13. DEVIATION (IF ANY) : NIL

14. ITEM FITTED ON THE COACH ON TRIAL : NIL

S NO	ITEM PARTICULARS	PURPOSE	REPORT	REFERENCE & PERIOD OF TRIAL
			Frequency	

15. WARRANTY:

S NO	COMPONENTS	WARRANTY
1	Brake blocks, wheels, push gravity cocks, flushing valves, moldings, window glasses, mirrors, roller blinds, curtain & bulbs etc. (items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies (bought out items)	24 months date of dispatch of coach or 30 months from date of supply of material whichever is earlier.

NOTE:

- This warranty covers free supply of parts which wear out and fails within warranty period of normal service.
- This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
- This doesn't cover any consequential liabilities or damages/loss incurred by anybody; furthermore, it shall in no case extend to repayment, return of the coach or replacement of complete coach.
- Whether a defective part is to be replaced or repaired shall be at the discretion of RCF/RBL.
- For any complain/ suggestion please mail at qualityrcfbl@gmail.com

DY CME

RCF/RBL

सुप. मु. या. अभि. / फर्नि.

DY CME/FURNISHING

रेल कोच फैक्ट्री / रायबरेली / लालगंज

RCF / RBL / LLJ

SSE/QC

RCF/RBL

सीनियर सेक्शन इंजीनियर (क्वालिटी कंट्रोल)
रेल डिब्बा कारखाना, रायबरेली



रेल डिब्बा कारखाना, कपूरथला
Rail Coach Factory, Kapurthala

12.	Bogie Details:		Shell No.		Railway		Type		Coach No.		Dispatch Date	
			4098/RBL				LACCN				08/01/2015	
12.1	Wheel & Axle Details:		PP Side					NPP Side				
	i.	Bogie No.	147066 147067					147068				
	ii.	Frame No.	FIAT-3670					FIAT-3676				
	iii.	Bolster No.	173-P					4443-GT				
	iv.	Axle No.	A-2919		B-9869		Z-3345		A-3135			
	v.	Wheel Dia.	917.00	917.00	917.00	917.00	917.00	917.00	917.00	917.00	917.00	
	vi.	Wheel Disc No.	287-16339	009-11605	268-11610	244-16339	225-51912	037-51916	007-51916	023-11611		
	vii.	R.B. Nos.	36299	36007	35939	36436	36511	35956	35782	35944		
	viii.	R.B. Make	TIMKEN		TIMKEN		TIMKEN		TIMKEN			
	ix.	RB Type	UIC CARTRIDGE TAPER ROLLER BEARING									
12.2	Secondary suspension load deflection Values:											
	Description		Secondary 1		Secondary 2		Secondary 1		Secondary 2			
			Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner		
i.	Make & nos.	CMFSK-14-2-59	G13-2-4000	CMFSK-14-2-44	G13-3-4336	CMFSK-14-2-74	G13-3-4053	CMFSK-14-2-71	G12-5-2011			
ii.	Ht. attest load	510	465	514	467	511	466	514	466			
iii.	Align. deviation	6	20	4	16	6	5	6	9			
12.3	Items traceability:											
	Sno.	Item	PP Side Bogie				NPP side Bogie				Make	
	i.	Primary Outer Spring	L&S-12-5				L&S-12-5				L&S	
	ii.	Primary inner Spring	L&S-12-5				L&S-12-5				L&S	
	iii.	Primary Damper									GEREP	
	iv.	Secondary damper									SACHS	
	v.	Lateral Damper									GEREP	
	vi.	Yaw Damper									NIL	
	vii.	Brake cylinder & Caliper									KBI	
	viii.	Brake Disc									KBI	
	ix.	Ball joint Control arm									GMT	
	x.	Lateral Bump stop									GMT	
	xi.	Traction center make									SARITA	
	xii.	Traction lever make									SARITA	
	xiii.	Ball joint traction lever									GMT	
	xiv.	Traction centre elastic									SGA	
	xv.	Secondary rubber pad									TESPAK	
	xvi.	Rubber spring									GMT	
	xvii.	Anti roll bar make									EMSON	
	xviii.	Ball joint roll link									SARITA	
	xix.	Fork make									EMSON	
12.4	i.	Modification / Trial (if any):					NIL					
	ii.	Deviations (if any):					NIL					

AB
6/4/15
882/100



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(RAIL COACH FACTORY-RAEBARELI)**



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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

TYPE COACH	LWACCN	SHELL/COACH NO	148136/C
RAILWAY	SER	DATE OF DESPATCH	
Sr no	Description of tests		Remarks
1.0	REFERENCE SPECIFICATION : L 446		
1.1	AIR CONDITIONING TEST : ELPS/TP/AC 01.		
1.2	CODE OF PRACTICE OF WIRING : ELPS/SPEC/EOG/AC-01		
2.0	INSULATION RESISTANCE : Setting of insulation monitoring relay at 30K ohms as per TD 111 of M/s LHB.		
	Observed status : HEALTHY		
3.0	AIR DELIVERY MEASUREMENT	OBSERVED VALUE	OK
3.1	Fresh Air	31.02 Cub mtr/min	OK
3.2	Return Air	74.27 Cub mtr/min	OK
3.3	Exhaust Air	10.78 Cub mtr/min	OK
3.4	Conditioned Air	192.45 Cub mtr/min	OK
4.0	PRE COOLING TEST: Max 01 hr. Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition		OK
	Not done due to ambient temp below 22°C		
5.0	PULL DOWN TEST: Max 02 hrs. Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition.		OK
	Not done due to ambient temp below 22°C		

(Signature)

**Senior Section Engineer
Quality control / Electrical
RCF, Raebareli**



Govt. of India- Ministry of Railways
(RAIL COACH FACTORY-RAEBARELI)



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FOR ELECTRICAL ITEMS

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

Sr no	Description of test	Remarks
6.0	HUMIDITY CONTROL	OK
7.0	PUMP EQUIPMENTS	OK
8.0	WORKING OF EXHAUST FANS OVER LAVATORIES	OK
9.0	WORKING OF COMPOSITE PANTRY	OK
10.0	COMPARTMENT LIGHT	OK
11.0	PUBLIC ADDRESSING SYSTEM (PAS)	OK
12.0	WHEEL SLIDE PROTECTION SYSTEM (WSP)	OK
13.0	WORKING OF 60KVA TRANSFORMER	OK
14.0	WORKING OF REGULATED BATTERY CHARGER	OK
15.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
16.0	SAFETIES :	OK
16.1	THERMOSTAT :	OK
16.2	ROTARY 07 SET POINTS (NORMAL CONDITION)	OK
16.3	MID SET POINTS (SENSORS FAILED CONDITIONS)	OK
16.4	HYGROSTAT	OK
16.5	CONTROL CIRCUIT	OK
16.6	POWER CIRCUIT	OK
17.0	REFRIGERANT USED	OK

R 407C

(Signature)

Senior Section Engineer
Quality control / Electrical
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(RAIL COACH FACTORY-RAEBARELI)



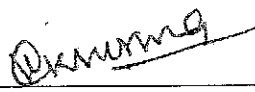
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make: INTEC Sr no of RMPU (NPP side) : 14-L-284 Sr. no of RMPU (PP side) : 14-F-153 Sr no of Microprocessor: 14-L-183/ARECA	As per rdso/pe/spes/ac/0061/rev-1/2005	02
02.	Switch board cabinet Make: TRANSTEL ENG. Sr no : 073/009	As per spec no EDTS073,REV-D,AM-6	01
03.	Pump equipment with PLC controller & pump box Make: KALSI Sr no PA- 3870/05/14 Sr no.1- 248140/05/14 Sr no.2- 248141/05/14 Sr no.CPA- 3864/05/2014	As per spec EDTS 186,Rev-a, Am- 2	01
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make: INTEG	EDTS331, TYPE-1 CORR.-1&2	02
05.	Vestibule Light Fitting Single	LW 76004,Alt-b	07
06.	Ceiling light fitting DOUBLE w/o diffuser.	LW 76011,Alt -c	09
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3	LW 76013,Alt -c	09
08.	Emergency light system for EOG type coaches (AEL)	EDTS 151,Rev -c Am-1 & 2	04
09.	Lavatory light fitting assly	LW 76001,Alt nil	04
10.	WC gauge signal light	LW 76006,Alt-c	02


Senior Section Engineer
Quality control / Electrical
RCF, Raebareli



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RCF/RBL/QEF7001

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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
11.	Passenger alarm coach indication light	LW 76005,Alt-e	02
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/ D/TL 0011- 2000,Rev I, Sec- I, 07/2001	34
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	25
14.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	04
15.	Terminal strip	EDML 034,Rev-a	01
16.	Terminal connector	EDML 037,Rev 'a'	04
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev nil, Item 1.	09
18.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame.	EDML 045,Rev nil ,Item 2.	09
19.	PA system for LHB coaches Make :AHUJA	EDTS 173,Rev-a Am-1,2&3	01 set
20.	70AH/110V, 54 Cells, 02V each, maintenance free pure lead acid tin monoblock, battery set with 09 modules 12V each. , factory pre charged. Make :HBL Lug date :09/2014	EDTS 129,Rev nil	01 set
21.	Battery box for LHB coaches.	1 10113 0 76. 700 005 w/o item 5,22 ,23 ,26 & 27.	01

(Signature)

Senior Section Engineer
Quality control / Electrical
RCF, Raebareli



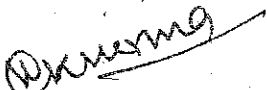

Govt. of India- Ministry of Railways
(RAIL COACH FACTORY-RAEBARELI)



RCF/RBL/QEF7001
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make : ISG	As per LW 71001,Alt-F	01
23.	Battery fuse box -ve Make : INTEG	As per LW 71002,Alt-F	01
24.	Regulated battery charger Make : IC ELECT. Sr no:14-12-006	As per RDSO/pe/spec/ac/01 29, Rev.-1 (2009)	01
25.	Emergency battery charger Make : BHASIN Sr no:04140520	EDTS 163,Rev `c` corg.-2&3	01
26.	60KVA transformer Make : VIMAL Sr no : 2261	As per rdso/pe/spec/ac/008 0/rev-0 (2007)/Am- 1&2/Corr. 1,2&3	01
27.	ZS coupling 400A/750V/03Ph/50hz. Make : S INTERNATIONAL	As per spec No EDTS 105,Rev `e` Am-2	02 sets
28.	Feeder junction boxes. Make : NEC	EDML 020,Rev-I	02
29.	Wheel set earthing equipment. Make : DARSHAN ENTERPRISES	EDTS101,REV- C,AM-1	02
30.	Wheel Slide Protection System (WSP) Make : KNORR & Sr no :0114201219	M/s : KNORR	01 set
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : SIDWAL	As per spec no EDTS 139, Rev- E ,Sec II.	01

 SSE/EL/QC	 DYCEE(P)/RCF/RBL
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विद्युत उत्पादन-गुणवत्ता
रेल कोच फैक्टरी / लालगंज / रायबरेली
Sr. Section Engineer
Electric Production - Quality
RCF / RBL / LLJ

उप मुख्य विद्युत अभियंता (उत्पादन)
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DY.CEE/P-RCF/RBL/LLJ